

**NHANES 2001–2002 Data Documentation  
December 2004  
MEC Questionnaire**

**Oral Health (OHX)**

Survey Years Included in this File: 2001–2002

**Component Description:**

NHANES is critical for monitoring oral health status, risk indicators for disease, and access to preventive and treatment services. This component will address public health significance in areas of surveillance, prevention, treatment, dental care utilization, health policy, evaluation of Federal health programs, standardization of new methods, and oral health disparities.

Oral health data from NHANES will be used for:

- Assessing the prevalence of major oral health diseases and conditions including dental caries, periodontal disease, dental trauma, dry mouth, and fluorosis;
- Assessing prevention and treatment efforts including the prevalence of dental sealants;
- Evaluating specific public health programs/new policies and initiatives;
- Monitoring the oral health status of minority/underserved populations;
- Evaluating *Healthy People 2000 and 2010* objectives related to oral health;
- Supporting research activities as identified in the 2000 Surgeon General's Report on *Oral Health in the United States*.

**Eligible Sample and any Component-Specific Exclusion Criteria:**

Participants aged 2 years and older who do not meet any of the exclusion criteria. A positive response to any of the following medical health screening questions asked of participants aged 18 years or older will exclude them from the root caries assessments.

- Has a doctor or dentist ever told you that you must always take antibiotics (e.g. penicillin) before you get a dental check up or care?
- Do you have a heart problem (specifically congenital heart murmurs, heart valve problems, congenital heart disease, or bacterial endocarditis)?
- Do you have rheumatic fever?
- Kidney disease requiring renal dialysis?
- Hemophilia?
- Pacemaker or automatic defibrillator or artificial material in your heart veins or arteries?
- A hipbone or joint replacement?

**Examination Protocol:**

**Subcomponents**

The following subcomponents are from the oral health examination component and home

interview component with the age groups of interest in parentheses:

- Medical history screening (13 years and older)
- Dental sealant assessment (2–34 years of age)
- Tooth count (2 years and older)
- Coronal caries (2 years and older)
- Incisor traumatic injuries (10–29 years of age)
- Dental fluorosis assessment (6–49 years of age)
- Root caries (18 years and older)
- Recommendations for dental care (2 years and older)
- Dry mouth and problems with chewing food (18 years and older)
- Dental health perception, dental visits and dental care utilization (2 years and older)

### **Survey Staff**

One of up to seven trained oral health recorders is paired with a licensed dentist to form a dental examination team. Two teams function independently throughout the data collection period. During the home interview, oral health data are collected by trained interviewers.

### **Data Collection Forms:**

Detailed placement and reading instructions are discussed in the NHANES Oral Health Training and Home Interview Training Manuals (available at [http://www.cdc.gov/nchs/about/major/nhanes/current\\_nhanes\\_01\\_02.htm](http://www.cdc.gov/nchs/about/major/nhanes/current_nhanes_01_02.htm)). Each chapter specifies procedures to be used for each of the oral health subcomponents.

### **Quality Control during Data Collection:**

The quality of data in this survey is controlled by (1) an intense training period for the dental teams with calibration of dental examiners prior to the beginning of the survey, (2) periodic monitoring and recalibration of dental examiners, and (3) periodic retraining of dental teams. The reference (gold standard) examiner visits each team 3 times per year to observe field operations and to replicate 20 to 25 dental examinations during each visit. The purpose of these “expert replications” is to determine if the field examiners are maintaining the examination standards achieved during training, and to measure the degree of deviation, if any, from those standards. If the inter-rater correlation is not within acceptable limits, retraining is conducted on site and future monitoring of the field examiner intensified. Approximately 10% of examined participants are asked to return for a replicate exam. The purpose of these “repeat exams” is to monitor internal consistency within examiners regarding the data collection process. Each dental examiner participates in an annual retraining session, also conducted by the reference examiner.

### **Data Processing and Editing:**

Automated data collection procedures for the survey were introduced in NHANES 1999. In the MECs, data for the oral health component are recorded directly onto a computerized data collection form. The system is centrally integrated and it allows for ongoing monitoring of much of the data.

## Component-Specific Analytic Notes and File Variables:

The oral health exam data will be released in the configuration of four “chapters.” These chapters are Dentition, Periodontal, Miscellaneous, and the Home Interview. The oral health chapters and subcomponents in parentheses are matched as follows for this release:

- Dentition (tooth count, coronal caries, root caries, dental sealants, incisor trauma, and fluorosis)
- Miscellaneous (medical exclusions, care recommendations, and miscellaneous)
- Home Interview (dry mouth, dental visits, and dental health perception)

The following oral health chapter with subcomponents will be released at a later date: Periodontal (periodontal pockets, recession, loss of attachment, and bleeding).

A variety of oral health variables can be derived to assist analysts using the oral health exam data. Recommended derivations and a selection of sample code are provided in the Appendices.

## Special Notes on Using the Dataset:

The analysis of NHANES 2001-2002 oral health data must be conducted with the key survey design and basic demographic variables. The NHANES 2001-2002 Household Questionnaire Data Files contain demographic data, health indicators, and other related information collected during household interviews. They also contain all survey design variables and sample weights for these age groups. Other household questionnaire and oral questionnaire files may be linked to the oral health examination data file using the unique survey participant identifier SEQN.

Beginning in 2002, there were three additions to the Dentition assessment: (1) residual dental root-tips were assessed for during Tooth Count; (2) the type of replacement for missing teeth (i.e. either removable or fixed) was ascertained in Coronal Caries; and (3) denture questions were added. These items will not be released because they were added in mid-data collection cycle. Consequently, derived variables were created for data collected during 2001-02 to make Year 4 variables comparable to Year 3 variables. This was done for Tooth Count (OHD##TC), Coronal Tooth Condition (OHD##CTC), and Coronal Surface Condition (OHD##CSC).

Additionally, the 1999-2000 OH questions on Xerostomia (OHQ080, -090, -100, -110) are now OHQ085, -095, -105, and -115, respectively, to reflect the age change from 40+ to 18+ years. This change was made in 2001.

In 2002, the medical exclusion question inquiring into a history of needing to take antibiotics prior to dental treatment was slightly modified. With the beginning of the current NHANES (1999), all dental examiners were instructed to probe if a positive response was given to this question. All probes were to include the word “always” needed to take antibiotics prior to dental treatment or dental care. Consequently, “always” was added to question OHQ130 to accurately reflect what respondents were reporting “yes” to. For this data release, a bridge variable (OHD130) was created for the 2001 and 2002 data collection periods.

## Appendices:

The Oral Health collaborator group (NIH/NIDCR, CDC/NCCDPHP/DOH, and CDC/NCHS) has provided the following SAS code to promote transparency and uniformity in the analyses of the current NHANES data. The sample code is divided into five topic areas: Dental Caries Status, Dental Sealants, Dental Fluorosis, Home Interview Questions, and Administrative. Please see the accompanying data document entitled **NHANES 2001-2002 Yr3-Yr4 Data Release Oral Health Data Appendix**.